Title: **Coordination compounds with Schiff bases as ligands and their magnetic properties.**

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Schiff bases are very interesting molecules to be used as ligands in coordination chemistry because they are very versatile since they have a great variety of possible molecular structures. By being able to change the functional groups in a very simple way with simple reactions, a great variety of complexes with different magnetic properties can be obtained. In this way, by searching for the optimal reaction conditions (reaction ratios, secondary ligands, oxidation states, etc.), coordination compounds with interesting magnetic properties can be obtained relatively easily.

One of the great goals of the molecular magnetism research groups is to obtain single-molecule magnets (SMMs), which have been shown to have important applications in fields of science that still have much to be investigated, such as in quantum computing.

The work was originally focused on the synthesis of coordination complexes derived from Schiff bases to study their magnetic properties in the search of SMM behaviour using 3d and 4f metals or by combining the two kind of metals, but due to the circumstances of the pandemic induced by the COVID-19, it was reoriented as a bibliographic report.

Key words: Schiff bases, ligands, coordination compounds, magnetic properties, single molecule magnets.